

## MOTION COMPATIBLE SENSOR FOR NON-INVASIVE OPTICAL BLOOD ANALYSIS

### ABSTRACT OF THE DISCLOSURE

A non-invasive optical sensor which uses the motion signal to calculate the physiological characteristic being measured. For pulse oximetry, a least squares or a ratio-of-ratios technique can be applied to the motion signal itself. This is made possible by selecting a site on the patient where variations in motion produce signals of two wavelengths which are sufficiently correlated. In particular, it has been determined that a sensor placed on a nail, in particular a thumbnail, exhibits the characteristics of having the red and infrared signals correlated when used for pulse oximetry, and the resulting signals correlate to arterial oxygen saturation.

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